

III. An Account of the strange effects of the Indian Varnish. Wrote by Dr Joseph del Papa, Physician to the Cardinal de Medices, at the desire of the Great Duke of Tuscany. Communicated by Dr William Sherard.

The using and handling of the *Indian Varnish* (or *Lackar*) so far as is necessary to apply or lay it on subjects to be varnished, having produced such extraordinary effects on Signior *Ignatio*, and more remarkably on his Maid Servant, *viz.* in great swellings of their Heads and Eyes, and in their Arms, and indeed almost their whole Body, with an intolerable itching and inflammation, or heat and pimples, is so new and extraordinary a Phænomenon in Nature, as exacts the wonder, and presses the curious to search the reason; and the rather, for that amongst the numerous Ingredients of the *Materia Medica*, and all other natural substances known to us, there is not one that produces equal or the like alteration to what this does in humane bodies. All our Liquors and corrosive Spirits hurt only the parts of the Body that they immediately touch, and diffuse not their mischievous quality over the whole Body, as this Varnish does, and the hurt caused by them is very different. Poysonous fumes or steams from Mercury or Antimony manifest their malignity on the Brain and Nerves with great and incurable evils: whereas the Effluvium and touch of this Varnish offends only the external skin of the whole body, indeed after a very strange manner, but yet not destructive to the part affected, which grows well again of itself. There are indeed some juices of Roots and Herbs, and other parts of Vegetables, which touching our flesh, some inflame it, some ex-

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ulcerate it, some produce swellings, pustules and itching ; but all these produce the evil only where they touch, and spread not their invisible venom over other parts of the Body. In fine, I know not the example of one thing, which either only toucht with the hand, or insinuating itself by its fume or vapour into our body, is able to produce over almost all the skin of the body, inflammations, swellings, itching and Pustules, as if the whole body were stung with an infinite number of Wasps or Gadbees, for such exactly are the effects caused by this Varnish.

This great difference between this and all things else that we know, and the Ingredients of which it is made, being absolutely unknown, renders it impossible to penetrate the cause of the above-named effects. Yet whoever would give some satisfaction to the mind, by proposing some probable thought, may say that this Varnish contains some matter, which when hot sends into our Body a very subtile thin Vapour, which affects only the skin, leaving the other parts of the body untoucht ; after the same manner, Cantharides, not only taken inwardly, but also outwardly applied to our Bodies, communicates a venomous quality of a particular nature, affecting only the Kidneys, Bladder and Urinary passages, causing there sensible pains and excoriations, not in the least touching the other *Viseera*. Some Physicians of Repute are of opinion, that this particular disagreement of Cantharides with the Urinary Ducts, comes from the Salt and Nitre contained in the Urine, which gives life and vigour to the Poysion of the Cantharides, without which Salt the Poysionons quality of the Cantharides could have no power. So after the same manner it may be said that the noxious fumes of the Varnish becomes hurtful to the Skin, because it mixes there with some juice it meets with in the Skin itself, especially in the miliary glands, whereof the whole Skin is full. This thought is but an imagination, without any certain basis, but in matters of this difficulty we may well bring

bring only probable and likely arguments. This is certain that this Varnish exerts all its malignity against the Skin, the *Viscera* and Blood being untouched ; besides, I observed that the Maid (at the same time as her whole Skin almost was hard, inflamed, swell'd, and full of pustules) had yet no Fever, no pain in the Head, nor any inward sickness or illness ; and as to what disorders she or Signior *Ignatio* felt in their Eyes, this likewise was only a swelling affecting the Eye-lids only, which may be reckon'd but as Skins : but 'tis possible the ill effects of the Varnish was more sensible and troublesome in that part, because the Skin there is thinner and more delicate than on the rest of the Body. This Varnish therefore is only an enemy to the Skin ; and that this mischief should attend it, it is not necessary that the Varnish should be heated ; for altho it is cold, it sends forth this ill steam, which insinuates itself into the Body, especially when touched and handled.

I have several times spread a great deal of this Varnish hot upon the naked skin of Poultry, and they never received any mischief from it, either internal or external. I have caused other Fowl to swallow crumbs of Bread soft in the Varnish, and they seemed to like it very well. In others I have made several little pricks in their breasts till the Blood came out, and then anointed it all over with Varnish, which, instead of hurting them, proved a Balsam to heal them. It is possible this Varnish on the very thin skin of Fowl does not produce the same effects as on that of Men, because they are very different from one another, in their structures and quality of the humours contained in them. And to say something of its substance ; I have observed that this Varnish is in a great part composed of a Gummy and unctuous matter, and since it is very light, swimming upon Brandy and Oyl, and unites neither with Water nor Spirit of Wine, nor any other Liquor but only with Oyl ; and burns or takes fire, for I have dipt Cotton in it, which has burnt all away to ashes,

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tho at first there was some difficulty to make it take fire ; pre-
chance some other matter not unctuous being mixt with it.
And lastly, Since, being observed with the Microscope, its
composition shews like that of Oyl or Lard, or the like unctuous
matter, it is very likely from all these, that it is composed
of the Gum or juice of some Resinous Herb or Tree,
or of the fat of some Animal, or Hogs Lard. And to make
some guess ; who knows but the Gall of some creature
may be mixt with it, to make it the more easily receive a
smoothness and lustre, as Limners use to put Gall into their
Water-colours, to make them run and spread the better ;
and that the mischief we find in touching and using it may
proceed from hence.

I verily believe, there is no Mercury, of what sort soever, in this Varnish ; not only because it is very light (as was said) But besides, because I have been very diligent in trying whether Gold would discover any sign of Mercury, either in the body of it, or the smoke, but could never find any ; and moreover, Mercury produces very different effects in our Bodies, from those before related of this Varnish.

Besides, I have observed that the Varnish, mixt with Spirit of Vitriol, or Juice of Limons or Vinegar, or Spirit of Wine, makes no ebullition nor change of colour ; but it readily changes colour, when taken out of the Vessel, it is expos'd to the air, becoming at first reddish, and afterwards almost quite black ; the outward skin of it, which is next to the air, becoming very hard and black : This Skin is very thin, under which the rest of the Varnish remains soft and fluid, of the colour and consistence of Honey ; and as often as you take off this outward black hard skin, there will another be formed immediately like the former, and this as often as you please to repeat the experiment. So that the whole substance of the Varnish will in time be changed into these hard and black skins.

Finally, 'Tis worth observing, that this Varnish has this known power ; for having spread some of it on the naked Breast of some Fowls, leaving it sticking there for three days, I afterwards found between the dried Varnish and the Flesh the place all festered, and full of a yellowish Serum and Matter, but without any farther mischief to the Body of the Fowls themselves. I have attempted the same thing in Dogs and Cats, but without success, for these Animals with their tongues and claws soon take off all the Varnish from their Bodies, and so have no hurt by it. Possibly in Horses and like Beasts the Experiment may succeed better, if the Varnish has this corrosive or Caustic quality upon their Bodies as it has on Poultry.

IV. Observations upon the Dissolutions and Fermentations which we may call Cold, because they are accompanied with a Coolness of the Liquors into which they pass. And of a new Thermometer Extracted out of a Discourse, which Mr Geoffroy, F. R. S. made in the Public meeting of the Royal Academy of Sciences, the 21st of April, 1700.

The different Searches which I have made about the Nature and Propriety of Salts (in order to acquit my self of the Promise I had made of taking some pains in this matter, when I had the Honour to be admitted into this Society) and the different Experiments which I have tryed, in examining their Dissolutions or Mixtures in certain Liquors, have given me occasion to observe, that the Mixture of the greatest part of the Salts in many Liquors is accompanied with a sensible Coldness of the Li-

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